

Title: Self-Compassion Training to Improve Well-Being for Surgical Residents

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Abbreviations: ACGME, Accreditation Council for Graduate Medical Education; PGY, Post-graduate year;

RTHC, Resilience Training for the Healthcare Community; SCHC, Self-Compassion for Health Care

Communities; MSC, Mindful Self-Compassion; MBI-HSS, Maslach Burnout Inventory-Human Services

Survey; MasEE, emotional exhaustion subscale; MasDP, depersonalization subscale; MasPA, personal

accomplishment subscale; PHQ-9, Patients Health Questionnaire-9; PSS, Perceived Stress Scale; STAI-6,

Spielberger State-Trait Anxiety Inventory-6.

Abstract

Context: Burnout remains prevalent among surgical residents. Self-compassion training may serve to improve their well-being.

Objective: To evaluate the impact on well-being of a self-compassion program modified for surgical residents.

Design: This is a 3-year, mixed-methods study using pre-post surveys and focus groups to identify areas for programmatic improvement and the subsequent impact of the modifications.

Setting: A single academic institution.

Participants: Surgical residents participating in a self-compassion program.

Interventions: A self-compassion program adapted from a larger course to fit the needs of surgical residents.

Main Outcome Measures: Themes relating to the program's strengths and weaknesses were identified through participant focus groups. Well-being was assessed through validated measurement tools, including The Maslach Burnout Inventory (MBI), Patient Health Questionnaire-9, Perceived Stress Scale, and Spielberger State-Trait Anxiety Inventory-6.

Results: 95 residents participated in the self-compassion program, of which 40 residents completed both surveys (total response rate: 42%). All participants demonstrated severe burnout pre-program, based on scores of at least one of the MBI subscales. Emotional exhaustion scores improved post-program, with larger improvements seen after program modifications (2018: 58% vs 2020: 71%). Focus group findings demonstrated that residents need a safe and distraction-free space to practice self-compassion, and program engagement improved following modifications.

Keywords: Self-Compassion; Mindfulness; Well-being; Burnout; Surgical Education

Introduction

There is an alarmingly high incidence of burnout and depression among resident physicians,¹ which is especially prevalent among surgical residents, with up to 75% meeting criteria for burnout.² The precise causes of burnout for surgeons and surgical trainees vary and are not completely understood; however, long work hours, lack of autonomy, and poor self-care are likely strong contributors to the feelings of emotional exhaustion and depersonalization, two of the three components of burnout.³ Additionally, the presence of complex and historically ingrained social norms relating to the culture of surgical training and the surgical workplace likely serve as integral underlying factors that contributes to the high rates of burnout.^{4,5} Unfortunately, the presence of burnout can lead to serious adverse effects for surgeons, both professionally and personally.^{1,3} While there has been an increased focus on mitigating burnout among physicians, no clear strategy has proven to be successful.⁶

Mindfulness, and the related concept of self-compassion, are tools that have been shown to improve well-being and lower burnout and depression among populations of healthcare workers.⁷⁻¹⁰ Self-compassion, specifically, is a well-described method for responding to oneself at times of challenge and stress, and is comprised of dimensions of compassionate self-responding (i.e., mindfulness, common humanity, and self-kindness) and uncompassionate self-responding (i.e., over-identification, isolation, and self-judgment).^{11,12} Mindfulness refers to maintaining a balanced perspective rather than “over-identifying” or exaggerating the potential gravity of the situation; common humanity refers to the understanding that the nature of being human entails experiencing difficult emotions at times, and therefore counters the experience of feeling isolated or alone; self-kindness involves taking an active role in being supportive and caring to oneself rather than being overly self-critical or self-judgmental. As such, these components operate synergistically in a dynamic system to build resilience and emotional wellbeing.¹³ Recent evidence has demonstrated that healthcare worker burnout is in part related to overuse of these negative dimensions of self-compassion, such as self-criticism and isolation.^{13,14}

For surgical residents specifically, the same factors that predispose them to experiencing burnout, such as excessive workload and low self-compassion, may make implementing these courses difficult, as learners must have the time, focus, and desire to participate in the training program in order to achieve the intended outcomes.¹⁵ Beyond learner engagement, entire departments play a role in determining programmatic success through efforts such as resident scheduling, management of clinical responsibilities, prioritizing competing educational needs, and championing the perceived value of such interventions.¹⁶ Regardless of these difficulties, there is an expectation put forth by the Accreditation Council for Graduate Medical Education (ACGME) that training programs must nurture resident well-being within the learning environment through the use of skills that are at the core of self-compassion training, as demonstrated by ACGME Program Requirements, stating, “Self-care and responsibility to support other members of the health care team are important components of professionalism.”¹⁷

Fortunately, there is encouraging evidence that utilizing abbreviated mindful self-compassion sessions can lead to improvements in burnout among healthcare workers.⁹ As for the specific context of surgical trainees, these programs have been successfully implemented as part of residency training,^{18,19} yet they require modifications in order to improve feasibility and meet the needs of this unique population.¹⁶ However, the focused use of self-compassion training programs designed to specifically improve surgical resident well-being has not been investigated. Consequently, this study aims to evaluate the feasibility and impact on well-being of a self-compassion program modified for surgical residents.

Materials and Methods

Settings and Participants

The Institutional Review Board of The University of North Carolina at Chapel Hill approved this study. Surgery residents from a single academic institution who were enrolled in a self-compassion

program during the spring of 2018, 2019, and 2020 were invited to participate in the study. There were no additional criteria for study participation. The program was taught in a variety of locations within the hospital and included residents at different post-graduate year (PGY) training levels based on the year it was offered, which is further described in the following subsection.

Intervention

The self-compassion program, termed Resilience Training for the Healthcare Community (RTHC), was initially modified by the course instructors (including KB) from a prototype of a 6-hour course created for healthcare workers, named Self-Compassion for Health Care Communities (SCHC), which is an adaptation of the Mindful Self-Compassion (MSC) Program, a broadly taught course consisting of 24 hours of instruction designed to cultivate greater self-compassion.²⁰ The RTHC program was delivered in multiple sessions over 6 weeks, totaling 6 hours of instruction. It was facilitated by course instructors who are certified teachers of MSC.²¹ The goals of the RTHC program are twofold: 1) to explain how self-compassion practice can promote greater resilience and well-being and 2) to provide specific tools to practice mindfulness and self-compassion (Table 1).

The initial pilot program in 2018 was designed to fit the time constraints of surgical residents while addressing their specific well-being needs through teaching techniques intended to meet the learning styles of surgeons. The initial modifications of SCHC to the RTHC program included:

- An overview of physician burnout statistics and self-compassion research
- Beginning each session with settling-in practice
- Adding aspects of the “Compassionate Friend” practice from MSC
- Using more formal language (e.g., “Compassionate Friend” to Compassionate Coach)

After the 2018 program, The RTHC was then further modified in subsequent years based on participant feedback in an effort to continually improve its feasibility and success. These changes included:

- Limiting participants from all training levels to only PGY 1 residents
- Making participation in the course optional
- Encouraging participation by departmental leadership
- Protection of participant time during sessions from clinical responsibilities
- Moving the physical location of the sessions to more intimate spaces (2018: classroom, 2019: conference room, 2020: chapel)

Study Design

A one-armed, pre-post design was used and an electronic survey (Qualtrics, Provo, UT) comprising measures of burnout, depression, stress, and anxiety, as well as demographic questions, was administered each year prior to beginning the program and again at its completion. Immediately following the final session of each program year, participants were invited to discuss their overall experiences in a focus group: two separate focus groups were conducted in 2018 based on the number of participants, and a single focus group was conducted for each of the 2019 and 2020 program years. The focus group facilitator was a physician researcher previously unknown to participants (JLB) and a semi-structured interview guide with open-ended questions was utilized.

Well-Being Measures

Outcome measures of the survey included The Maslach Burnout Inventory-Human Services Survey (MBI-HSS),²² a 22-item, 5-point Likert scale tool comprised of three subscales: emotional exhaustion (MasEE), depersonalization (MasDP), and personal accomplishment (MasPA). Burnout was defined categorically by level of severity within the subscales of MasEE (low: 0-16, moderate: 17-26, high \geq 27) and MasDP (low: 0-6, moderate: 7-12, high: \geq 13).^{23,24} MasPA scores were not included for analysis as this measure was not an intended outcome of the intervention, and this domain of burnout has not been shown to have as strong an impact on outcomes.²⁵ Additional measures included The

Patient Health Questionnaire-9 (PHQ-9):²⁶ a well-validated 9-item depression screen on a 4-point Likert scale, The Perceived Stress Scale (PSS):²⁷ a 10-item, 5-point scale that assesses the degree to which one finds their life overwhelming and uncontrollable, and The Spielberger State-Trait Anxiety Inventory-6 (STAI-6):²⁸ a 6-item assessment that measures current state anxiety in which concurrent validity has been established with the 20-item long form. Throughout the years, departmental leadership and course facilitators reminded and encouraged participants to use the existing mental health resources available to them as needed.

Analysis

Descriptive analyses of the outcome measures were performed only on PGY 1 residents who completed both pre- and post-program surveys by calculating the percent of participants who had improved scores post- versus pre-program and comparing these results by each year that the program was offered. The analyses were conducted using SAS (version 9.4, Cary, North Carolina) and SPSS (version 26, Armonk, New York).

Post-program focus groups were audio-recorded and transcribed verbatim. The qualitative analysis utilized a grounded theory approach,²⁹ in which inductive methods generated themes from the data. Using a manual approach, two authors (JLB and SR) read through the transcriptions multiple times and independently developed codes to represent recurring concepts. They then compared codes, discussed areas of disagreement, and arrived upon themes for each year that the program was offered (Table 3).

Results

Demographics

Of the 95 total residents invited to participate, eighty-six consented to the survey (2018: n=52, 2019: n=17, 2020: n=17), and 40 residents completed both pre- and post-surveys (2018: n=33, 2020: n=7) for a complete response rate of 42%. Given that the inaugural program in 2018 was offered more broadly, whereas the subsequent programs were only offered to PGY 1 level residents, 48% of all participants were PGY 1 residents (PGY 1: n=19, PGY2-6: n=21), resulting in a PGY 1 response rate of 34%. Demographics of survey respondents can be found in Table 2. Over the three years that the program was offered, 20 total residents participated in focus groups.

Baseline Burnout Scores for All Participants

Prior to participation in the program, all 40 residents (100%) met criteria for high burnout according to the MasDP subscale, whereas for MasEE, 19 residents (48%) met criteria for high burnout and 20 residents (50%) met criteria for moderate burnout.

PGY 1 Residents' Outcomes by Program Year

To determine whether the modifications made to the program resulted in improved well-being scores, differences in pre-post program outcomes of PGY 1 residents were compared from 2018 versus 2020. When evaluating paired burnout subscales by change in numerical score, there were similar improvements in PGY 1 residents' MasDP scores from the program's first year to third year (2018: 42%, 2020: 43%). However, there were larger improvements in MasEE scores from the program's first year to the third year (2018: 58%, 2020: 71%). With the exception of anxiety, as indicated by the STAI-6 scores, all other outcomes demonstrated a larger percentage of PGY 1 participants with improvements in post-program numerical scores during the 2020 program versus 2018 (Figure 1).

Focus Group Findings - 2018 Program

In 2018, focus group findings revealed four themes: gratitude, lack of protected time, need for cultural change, and the surgeon personality in relation to self-compassion (Table 3). Firstly, residents expressed gratitude for the effort to include wellness programming and felt that this was a “very positive first attempt to address a problem that has been ignored for a really long time”. At the same time, they expressed challenges in the way the program was implemented: the lack of protected time meant that while they attended the program, residents remained responsible for their clinical duties and always had pagers with them, which disrupted their ability to fully engage with the program. Residents at all stages of training expressed the need for leadership to “protect” wellness programming by clearly communicating its importance through arranging for the delegation of patient care responsibilities while attending the program.

Residents recognized the value of wellness programming through the RTHC course yet felt that in some ways it conflicted with the “culture” of surgical residency and, therefore, expressed a need for a significant cultural shift in the field. They viewed residency sponsored wellness initiatives as “trying new things”, which was seen as a “very big shift in culture”. This perception of surgical culture seemed to relate to how residents interact with each other, with one participant hoping that this course would help “make our actions with other people better”.

Similarly, residents also noted the challenge arising from the conflict between “the surgeon personality” and self-compassion: several expressed that surgeons like to be busy so they can “kind of distract themselves from their anxieties inside” and that surgeons “like doing things that we are good at, and we are not good at being compassionate toward ourselves”. This made the program uncomfortable for them at times, but several indicated that acknowledging this discomfort could be an opportunity for growth. The program was especially challenging for PGY 1 residents who did not feel “safe” expressing vulnerability in the presence of later year residents, as articulated by one PGY 1 resident who shared that they felt extreme discomfort being open with the chiefs in the room. Furthermore, one resident

struggled with recognizing that although their inner critical voice had helped them to achieve and reach their academic and career goals, it also causes them harm; for example, they acknowledged that they would never talk to anyone else in the way that they talk to themselves.

2019 Program

Focus group findings from 2019 centered on protected time, the nurturing environment, and the importance of self-care. Residents appreciated that for many of them, depending on their rotation, they were not responsible for clinical duties during the course. Those whose time was not protected and subsequently received pages during the program voiced that it detracted from their experience. One resident remarked “it wasn’t emphasized enough that this is protected time and we are able to come”.

Residents appreciated the nurturing environment created by course leaders, and the safety inherent in a course restricted to PGY 1 level residents. This safe space facilitated bonding between residents and simple gestures, such as providing food, communicated care to them. In contrast to the results from the 2018 program, participants in 2019 described the course as an opportunity to rest and relax. One participant noted the importance of self-care and remarked that they had begun to practice self-compassion skills, stating, “this week I caught myself doing it, thinking about it when I got stressed, thinking: just stop for a minute”. Yet another resident remarked that residents could benefit from having additional sessions.

2020 Program

Themes that arose from the 2020 focus groups included gratitude, utility of practices, and the desire to deepen meditative practices. In particular, residents expressed the usefulness of some of the practices and the desire to go further with them. Increasing acceptability of the course was reflected in the comment: “the highlight was the timeout to think and talk, not to be constantly rushing around our jobs: it was forced or protected time to think about us”.

Synthesis of Comments

In summary, challenges that arose in each year informed modifications made to the program delivery in subsequent years. The need for the program to be implemented during protected time was essential. Residents noted that the concept of self-compassion conflicted with both the culture of surgical residency and the personality of surgical residents, yet they considered the possibilities for growth in these areas. Throughout the three years, residents expressed appreciation for the wellness initiatives implemented by the departmental administration.

Discussion

In order to meet the unique well-being needs of surgical residents, this study sought to modify an existing 6-week self-compassion program created specifically for healthcare communities. While participants initially expressed resistance to the program, focus group findings demonstrated that changes made due to participant feedback led to improved engagement and appreciation for the program (Table 3), as well as improvements in post-program well-being scores (Figure 1).

Focus group findings demonstrate the adverse impact of the “surgical culture” on allowing one to practice self-compassion. As the process of self-compassion works through opening oneself to one’s emotional pain, it necessitates being vulnerable and self-reflective,³⁰ which can be a difficult task for this population to accomplish.³¹ While participants recognized a need for a cultural shift within surgical residency to becoming more accepting of prioritizing personal wellness, they had reservations about the approach of the program. Some participants suggested that personality traits common among surgeons contributed to this resistance. While surgeons are clearly not a homogenous group, there has been research demonstrating that traits such as neuroticism are more common within this profession,³² which may serve as a unique barrier to implementing effective self-compassion training among surgical trainees. In contrast, this resistance has not been demonstrated to the same extent in other populations of healthcare professionals, such as nurses, participating in self-compassion programs.^{7,8,33} However, we

found that resistance dissipated as the program was modified, leading to participants feeling more relaxed, safe, and confident in their ability to practice self-compassion.

In addition to the benefit of creating a safe space for participants, we identified the importance of creating a free space, where having one's attention repeatedly be disrupted by pagers prevented residents from fully engaging in the program. As learning self-compassion involves experiential practices and exercises,²¹ disruptions may preclude one's ability to internalize the process. When leadership emphasized the priority of the course residents felt comfortable giving their pagers to team members, resulting in fewer distractions and greater engagement with the program. Each year that the program was offered and modified, residents increasingly expressed their appreciation for the time to take care of themselves and they communicated that they would be interested in continuing the program.

While all participants in this study met criteria for high burnout prior to the intervention, there were greater improvements in well-being outcomes as the program was modified to meet the participants needs. In particular, the percentage of residents that self-reported less stress post-program improved by 29%, and more residents showed improvements in both depression and the burnout subscale of emotional exhaustion. Depersonalization remained relatively unchanged across the three years, which may be because surgery residents feel they must compartmentalize and "depersonalize" aspects of their work in order to function successfully and efficiently at their job. This concept of learned depersonalization for physicians has been described in the literature and is recognized as problematic, however, use of mindfulness and compassion can serve as tools for changing how physicians perceive their work and interact with their patients.³⁴

Anxiety showed a smaller percentage in improvement in 2020 than in 2018, which may reflect the timing of the survey being administered in late March 2020 at the beginning of the COVID-19 pandemic. Generally, these trends in outcomes are consistent with other recent evaluations of the self-

compassion program for healthcare communities, where greater improvements are seen in levels of emotional exhaustion and stress, with less of an impact on depersonalization and anxiety.⁸

A number of limitations were present that reduce our ability to generalize the findings. First, the sample size of complete pre-post data was small as many residents did not complete the post-survey, and the decision to focus the intervention only on first year surgical residents narrowed the sample size further. Also, long-term outcomes were not evaluated and are therefore unknown in this study, yet there is evidence that improvements in burnout within healthcare workers persist after years of completing self-compassion training.³⁵ Additionally, the lack of a control group makes it difficult to determine whether improvements in well-being scores were due to the program itself. In summary, while we recognize the potential for bias in evaluating this complex topic, we hope that readers can find our results from the focus groups, with the supplement of the survey data, helpful in furthering their understanding of how self-compassion training may be used to benefit surgical resident well-being.

Ongoing efforts that include longer term evaluations are being made to continue to improve this program to meet the specific needs of surgical residents. These modifications have the potential for the program to be easily disseminated to other resident populations, including different training years, specialties, and settings.

Conclusion

High levels of surgical resident burnout clearly demonstrate a problem that needs to be addressed. Findings of this study suggest that simple modifications to a self-compassion program designed for healthcare communities improve its feasibility for a population of surgical residents, while also improving aspects of well-being.

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Declaration of Conflicting Interests: The authors declare that there is no conflict of interest.

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Tables and Figures

Figure 1. Post-program improvements in well-being outcomes for post-graduate year 1 residents in 2018 versus 2020 cohorts.

Table 1. Resilience Training for the Healthcare Community

Educational Objectives	Curricular Elements
Practicing Self-Compassion <ul style="list-style-type: none"> - Provide rationale for program - Introduce mindfulness and self-compassion - Establish a welcoming setting 	<ul style="list-style-type: none"> • Overview of physician burnout • Overview of self-compassion research with medical professionals • Guidelines for how to approach the program • Definitions of mindfulness and self-compassion • Misconceptions of self-compassion • Practice: Self-Compassion Break • Practice: Moments of Mindfulness
Discovering Your Compassionate Voice <ul style="list-style-type: none"> - Elucidate how we stay motivated and be successful without continual harsh self-judgment 	<ul style="list-style-type: none"> • Practice: Compassionate Coach • Discussion of resistance • The purpose of self-criticism • Motivating ourselves with compassion rather than self-criticism
Self-Compassion for Caregivers <ul style="list-style-type: none"> - Introduce a way to work with work-related emotions - Provide an understanding and specific tools to address caregiving stress 	<ul style="list-style-type: none"> • Practice: Body Scan • Strategies for Working with Difficult Emotions • Practice: Working with Difficult Emotions • Stress and Burnout for Caregivers • Compassion with Equanimity
Living Deeply	<ul style="list-style-type: none"> • Core Values for the Medical Professional

Table 2. Survey respondent demographics

Demographic		Total n=40	PGY 1 n=19	PGY 2-6 n=21
Age	25-30	27	15	12
	31-35	7	4	3
	36-40	5	0	5
	46-50	1	0	1
Gender	Female	23	10	13
	Male	17	9	8
Partner	Yes	24	10	14
	No	16	9	7
Children	Yes	8	1	7
	No	32	18	14
Cohort	2018	33	12	21
	2020	7	7	0

PGY, Post-graduate year

Table 3. Program evaluation

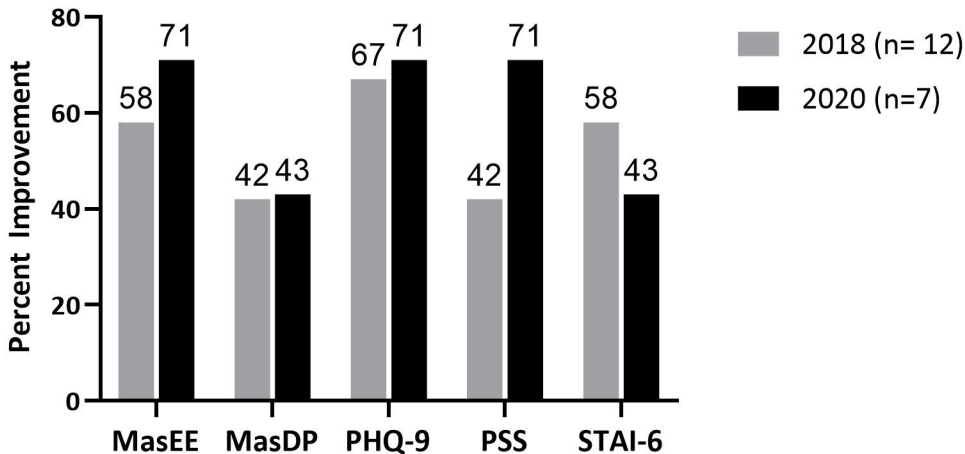
Themes	Supporting Comments
2018	
Gratitude	<p data-bbox="292 468 1436 528">“It was a good opportunity to slow down to recognize that I really do care about these people and that they really do care about me.”</p> <p data-bbox="292 551 1436 611">“This represented that there is somebody somewhere in the administration that noticed there is a resident problem.”</p> <p data-bbox="292 633 1393 656">“Very positive first attempt to address a problem that has been ignored for a really long time.”</p>
Lack of protected time	<p data-bbox="292 714 1477 808">“I think the worst part that...it wasn’t necessarily a protected time...if there was a way to actually make an hour a month protected from responsibilities on the floor... so that you can be more mindful and fully participatory.”</p> <p data-bbox="292 831 1485 925">“I think having class during protected education time would be more useful and practical...Every time I had to come to this class, I had to miss an OR case and find someone else to cover it and that can be very stressful.”</p>
Need for cultural change	<p data-bbox="292 983 1477 1043">“I think that it's certainly hard to find an hour, like, say we did an hour a month, I think something like that, even in a small way, starts to precipitate a little more as a cultural shift in our program.”</p> <p data-bbox="292 1066 1473 1189">“This year within our department, the emphasis on wellness has been significantly better than in years past, we are trying new things, and it's a very big shift in culture, and that takes time, and some of it can be mandated from above and some has to be organic, and I think we're trying to figure that out.”</p> <p data-bbox="292 1211 1477 1379">“I think this is something nice that we're doing overall because some of the other medicine residents ... they're scared to talk to surgery residents because they've been chewed out on the phone or through daily interactions. I think if we kind of work on ourselves, maybe over time, for the many years that we are here for, that, we can start to trickle down, and make our actions with other people better.”</p>
The surgeon personality	<p data-bbox="292 1438 1453 1498">“We tend to be on one end of the personality spectrum ...It almost seems like the entire mindset of self-compassion seems so counter to my whole life ... and maybe I'm too far gone at this point.”</p> <p data-bbox="292 1520 1409 1581">“It may be easier for junior residents to share and open up if there are not as many chiefs in the room.”</p> <p data-bbox="292 1603 1477 1800">“I think the reason this is all so uncomfortable is that we are bad at it. We are all type A people. We like doing things that we are good at. And we are not good at being compassionate toward ourselves. We spent are entire lives beating ourselves down that why we got to this point. I think the discomfort is that this is a foreign concept. I also think that is why it is so important. The concept of mindfulness is a big shift in the mentality of our entire field. ... I think if we continue it in then maybe 5 years from now it will not be so uncomfortable because it will be part of going through surgery residency.”</p> <p data-bbox="292 1823 1477 1912">[Compassionate Friend exercise]: “[I’m] grappling with the idea that I do have this very self-critical inner voice that's not really how I talk to anyone else and changing that voice and still having it be my own where it's motivating and allows me to keep my drive - all of that stuff, but, just kinder.”</p>

2019

Appreciation for protected time	"It wasn't emphasized enough that this is protected time and we are able to come."
	"More beneficial to at least be here even if we have the pagers."
	"Chief dependent: some took the lead and put this on the schedule; chiefs need to be told to put this in the schedule."
	"All the pages we got can wait."
Nurturing environment	"Bonding experience"
	"Liked dimmed lights"
	"Food was amazing, so nice."
	"Amazing. So sad this is over."
Importance of self-care	"An hour and a half to decompress, reflect, feel."
	"This week I caught myself DOING IT, thinking about it when I got stressed. Thinking-just stop for a minute."
	"Chiefs really need this but they may be too jaded already."
	"It would be nice to have more sessions. Maybe 45 minutes every week or every other week."

2020

Gratitude	"The highlight was the time out to think and talk. Not to be constantly rushing around our jobs. It was forced or protected time to think about us."
	"To me not necessarily the course but how supportive our teams and program director were for us all going to it. They were willing to let us miss whatever."
	"Our director made us feel very safe to attend these meetings."
	"It is always beneficial to have a space where people can come together, be protected and discuss."
Utility of practices	"I see being aware of your body during different parts of the day is useful. Taking a step back. Being mindful of my breath or my feet. If I get overwhelmed, I will use that."
	"The curriculum gave positive things that you can do, that was much more useful."
Desire to deepen practice	"People may gain more benefit from the guided meditations if there were a few you provided that we could do on our own in between or before the course."
	"A longer program would allow for more time to practice with reminders."



MasEE, Emotional exhaustion subscale of Maslach Burnout Inventory;
MasDP, Depersonalization subscale of Maslach Burnout Inventory;
PHQ-9, Patient Health Questionnaire-9; PSS, Perceived Stress Scale;
STAI-6, Spielberger State-Trait Anxiety Inventory-6